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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,173	03/15/2001	Wayne D. Grover	13597ROUS01U	3894
626	7590	07/29/2004	EXAMINER	
NORTEL NETWORKS LIMITED P. O. BOX 3511, STATION C OTTAWA, ON K1Y 4H7 CANADA			HO, DUC CHI	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/808,173

Applicant(s)

GROVER ET AL.

Examiner

Duc C Ho

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-14 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable Doucette et al., hereinafter referred as Doucette (Modularity and Economy-of-Scale Effects in the Optimal Design of Mesh-Restorable Networks, 1999 IEEE, pages 226-231).

Regarding claim 1, Doucette discloses a teaching using the spare capacity to restore failure of spans carrying working paths. The formulation 2, and 3 in page 228-

229 at the left column include a plurality of parameters for performing the capacity placement for each span in mesh restorable networks:

P(i) number of eligible routes for restoration of span (i),

H(2i) length of any eligible restoration route for failure of span (i),

C(j) cost of each unit of capacity on span (j)

These parameters and others in those equations are used to determine restoration routes in mesh restorable networks.

Doucette, however, does not specifically teach steps of (a) generating, (b) establishing, and (c) selecting.

One skill in the art would recognize the advantage of using step (a) for generating a set of eligible restoration routes for each span in the network; using step (b) for establishing a criteria in terms of route length and capacity cost for selecting a set of restoration routes; and using step (c) for selecting a set of restoration routes for each span from the eligible restoration routes in terms of route length and capacity cost.

It would have been obvious to one of ordinary skill in the art, at the time invention was made to employ the above steps into the teaching of Doucette in order to produce an algorithm performing steps to provide restoration routes in a mesh network comprising plural distinct nodes interconnected by plural distinct spans in such a way to overcome disadvantages in network restoration schemes such as providing at most one restoration failure per failure in self-healing technique.

***Allowable Subject Matter***

4. Claims 6-14 are allowed.

5. Claims 2-5 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bartlett et al. (US 6,137,775); Croslin (US 5,999,103); Box et al. (US 5,787,271); Grover (US 6,421,349); Fee et al. (US 6,038,044) are cited to show a method of providing restoration routes in a mesh network, which is considered pertinent to the claimed invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (703) 305-1332. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9314

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal  
Drive,  
Arlington. VA, Sixth Floor (Receptionist).

Patent Examiner

A handwritten signature in black ink, appearing to read 'Duc Ho', with a stylized flourish extending from the end.

Duc Ho

07-19-04